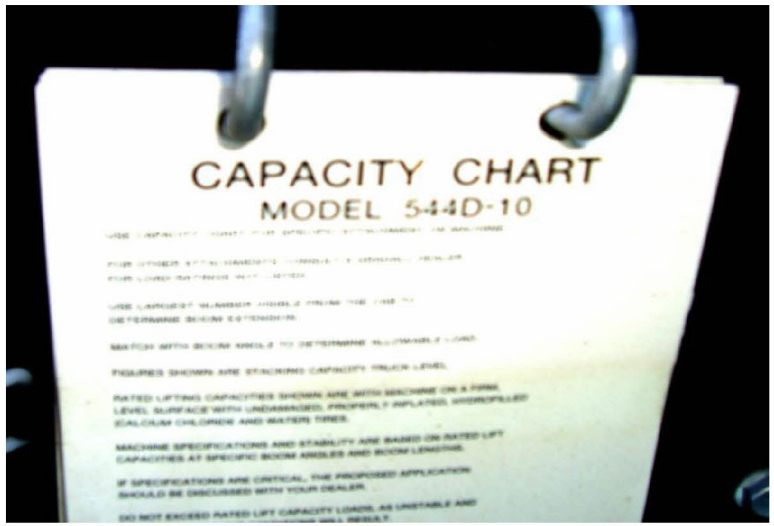
Review of Revised Refinery Instructions

Safety Topic of the Month
Richmond Refinery

5/1/09



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Revised Refinery Instructions (RIs)

Refinery Instructions are periodically revised and updated to better support our business and safety objectives.

This Safety Topic of the Month will review revisions to nine of our RIs with the intent of making the revisions easily accessible and provide a Refinery Wide learning opportunity.

- RI – 302, Color Identification and Labeling of Equipment and Pipelines
- RI – 306, Safe Operation of Powered Industrial Mobile Equipment
- RI – 321, Preventing Exposure to Corrosive Chemicals and Defining Yellow-Lined Areas
- RI – 338, Respiratory Protective Equipment
- RI – 341, Hot Work and General Work
- RI – 348, Benzene Compliance
- RI – 366, Contractors
- RI – 370, Management of Change
- RI – 371, Near Loss, Event Reporting, and Incident Investigation

If you would like to review the full Refinery Instructions, please follow the link below! Also, each page has the RI listed with a hyperlink at the top of the page.

Richmond Refinery Instructions

Question and Answer Sheet provided

Below, please find an **optional** Answer Sheet provided for this Safety Topic of the Month. Answer Sheets may be used or the group may elect to discuss questions and answers without using the answer sheet.

Thank you!

Answer Sheet

RI-302 Color Identification and Labeling of Equipment Pipelines

Revision:

1. Update of the documents referenced by the RI.

Intent of the Revision:

To ensure that the most up-to-date sources of information are used by the refinery.

*3.1 The color criteria are as follows:
(For color specifications, refer to
ANSI Standard Z535.1 2006, "Safety Color Code"
and section 300 of the Coatings Manual.)

RI-306 Safe Operation of Powered Industrial Mobile Equipment

Revisions:

1. Addition of Rough Terrain Powered Industrial Trucks to fall under the guidance of this RI.
2. Guidance for the use of Front End Attachments for Powered Industrial Trucks.
3. Guidance for Aerial Lift Exiting Permit.

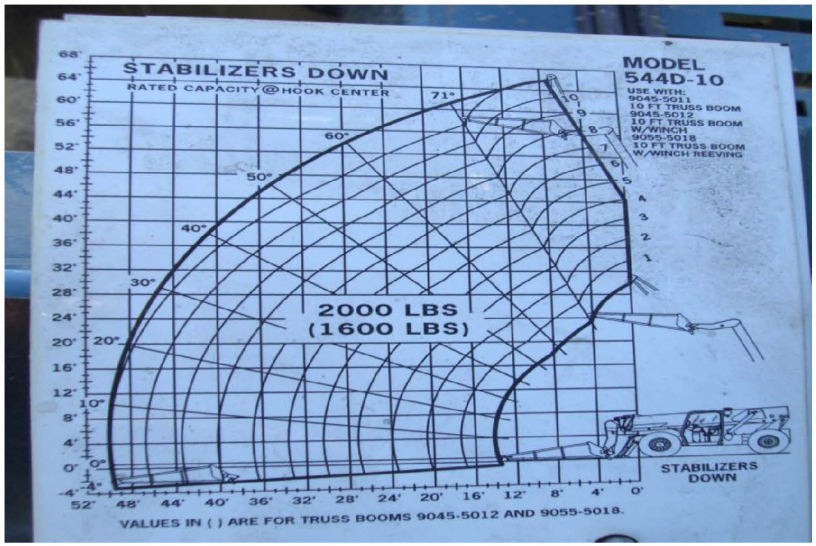
Intent of the Revision:

The addition of the Rough Terrain Powered Industrial Trucks, also known as **Off-Road Forklifts** or **Grade-All**, is to address the issues with the use of this specific type of forklift in the Refinery.

RI-306 (further information)

Additional OSHA requirements for Front-End Attachments were added to meet 29 CFR 1910.178(a)(5).

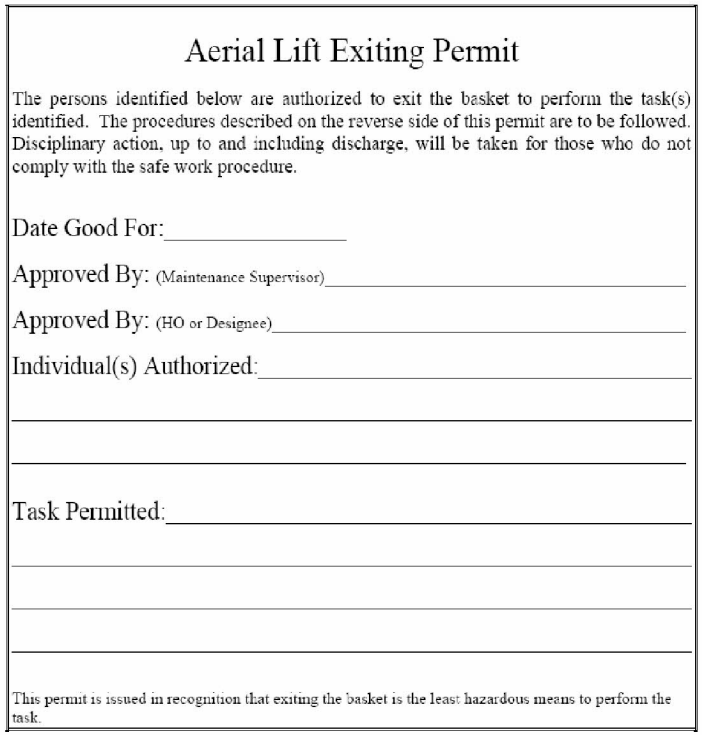
It requires that if any front-end attachment other than a factory installed attachment, will be marked to identify the approximate weight of the attachment/truck combination at maximum elevation with load laterally centered.



This covers both "Standard" and "Rough Terrain" Powered Industrial Trucks.

RI-306 (further information)

Please NOTE* An Aerial Exit Permit was added as Appendix II. This change allowed us to close the temporary MOC we were using for these types of events. It also gives us a standardized process for this operation when it is safe and appropriate. RI-306



Aerial Lift Exiting Permit

The persons identified below are authorized to exit the basket to perform the task(s) identified. The procedures described on the reverse side of this permit are to be followed. Disciplinary action, up to and including discharge, will be taken for those who do not comply with the safe work procedure.

Date Good For:_____

Approved By: (Maintenance Supervisor)_____

Approved By: (HO or Designee)_____

Individual(s) Authorized:_____

_____

_____

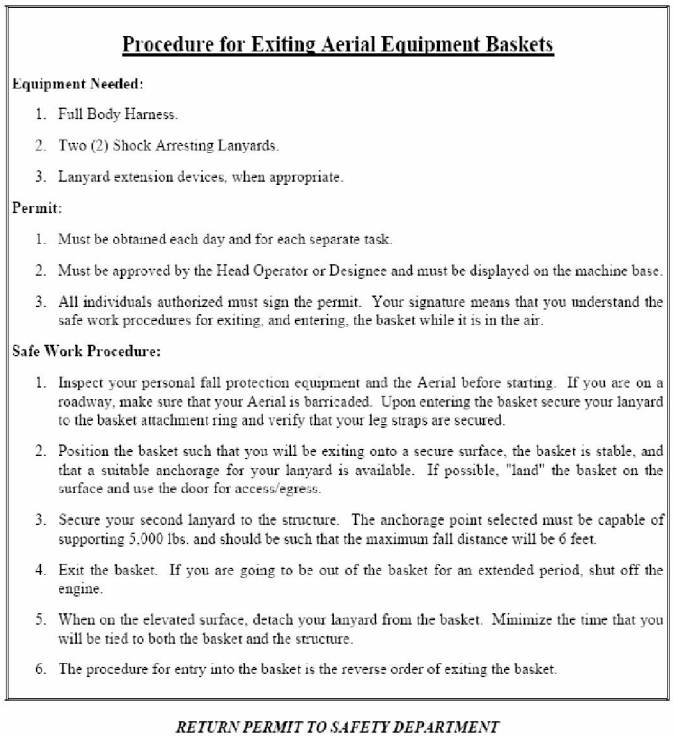
Task Permitted:_____

_____

_____

_____

This permit is issued in recognition that exiting the basket is the least hazardous means to perform the task.



Procedure for Exiting Aerial Equipment Baskets

Equipment Needed:

1. Full Body Harness.
2. Two (2) Shock Arresting Lanyards.
3. Lanyard extension devices, when appropriate.

Permit:

1. Must be obtained each day and for each separate task.
2. Must be approved by the Head Operator or Designee and must be displayed on the machine base.
3. All individuals authorized must sign the permit. Your signature means that you understand the safe work procedures for exiting, and entering, the basket while it is in the air.

Safe Work Procedure:

1. Inspect your personal fall protection equipment and the Aerial before starting. If you are on a roadway, make sure that your Aerial is barricaded. Upon entering the basket secure your lanyard to the basket attachment ring and verify that your leg straps are secured.
2. Position the basket such that you will be exiting onto a secure surface, the basket is stable, and that a suitable anchorage for your lanyard is available. If possible, "land" the basket on the surface and use the door for access/egress.
3. Secure your second lanyard to the structure. The anchorage point selected must be capable of supporting 5,000 lbs. and should be such that the maximum fall distance will be 6 feet.
4. Exit the basket. If you are going to be out of the basket for an extended period, shut off the engine.
5. When on the elevated surface, detach your lanyard from the basket. Minimize the time that you will be tied to both the basket and the structure.
6. The procedure for entry into the basket is the reverse order of exiting the basket.

RETURN PERMIT TO SAFETY DEPARTMENT

RI – 306 Question and Answer

1. Is there training required to operate Off-Road Powered Industrial Trucks? Do I have this qualification?
2. True or False? I can use any attachment on the equipment as long as it is safe to do so.

RI-321 Preventing Exposure to Corrosive Chemicals and Defining Yellow-Lined Areas

Revisions:

1. Section 2.0: Updated references.
2. Section 4.1: Clarified pH definition of a corrosive chemical. Clarified MSDS keywords that identify a corrosive chemical.
3. Section 5.1.1: Clarified the factors that determine the distance between the yellow boundary line and the hazard source. This change was made to provide consistency with the Safety In Designs technical standard.
4. Section 5.1.1: Clarified identification methods for unpaved areas or areas where paint is difficult to maintain. This change was made to provide consistency with the Safety in Designs technical standard.
5. Section 6.1: Added definition of chemical goggles.

Intent of the Revision:

- To more easily define a corrosive chemical using its pH and MSDS keywords.
- To make the RI consistent with updates to the Safety in Designs technical standard.

RI-321 – Question and Answer

1. True or False? A corrosive chemical can cause severe burns, destruction, or permanent injury to the eyes or skin.
2. True or False? A corrosive chemical requires identification by painted yellow lines and yellow caution signs, and also requires an accessible safety shower/eyewash unit.
3. True or False? Chemical goggles are always required as a minimum for entry into yellow-lined areas.

RI-338 Respiratory Protective Equipment

Revisions: **(Many revisions were made and may require additional review for complete understanding)**

1. Section 1.6 - Deleted requirement to obtain written approval from contracts group to equip, train, or fit test contractors.
2. Section 3.3 - Added that Safety Team Leader can delegate a program administrator.
3. Sections 5.1 - Clarified when atmospheres are considered IDLH.
4. Section 11.1 - Renamed "fresh air blower systems" to "positive pressure air pump" and moved it to the "supplied air respirator" category.
5. Appendix II - Added new contaminants and corrected respiratory protection exposure limits for existing contaminants.
6. Appendix III - Updated applicable standards. Changed term "air blowers" to "air pumps" and added details on their safe placement. Updated air test result distribution list. Deleted reference to the "breathing air analysis report" form that is no longer needed.

RI-338 Respiratory Protective Equipment

Revisions (cont.):

7. Appendix IV - Added more detailed instructions for the Scott Air-Pak monthly functional test.

8. Appendix V - Updated inspection decal information and noted that decals can be obtained from the Central Tool Room.

9. Appendix VI - Updated applicable references.

Intent of the Revision:

- To reflect updated respiratory protection standards and exposure limits.
- To reflect current Refinery practices related to respiratory protection.
- To clarify definitions and terms.
- To update the Scott Air-Pak monthly inspection documentation.

RI-338 – Question and Answer

1. True or False? Before wearing a respirator you must be medically cleared to wear it, trained on its use, and fit tested.
2. What do you do if your respirator is broken or malfunctioning?
3. True or False? If you smell a chemical or experience excessive breathing resistance while using an air-purifying respirator, first immediately leave the area and then inspect your respirator.
4. True or False? Respirators should be sanitized and stored in a clean, dry, closed container when not in use.

RI-341 Hot Work and General Work Permits

Revisions:

1. Section 2.6.1: An Open-flame Ignition Source Permit is used for work meeting the definition of hot work, such as burning, welding, grinding, wire wheel buffing or other operations capable of extreme heat. The Ignition Source Permit, MFG-7625, lists typical operations requiring an Open-flame Ignition Source Permit. These permits must be gas tested by a CFD Gas Tester.
2. Section 5.1.13: Ensure workers comply with the highest level of requirements if both Open and Non-Open Flame equipments are to be used on the same permit (i.e, Light plant, grinder, and electric tools would all have to meet the requirements for the grinder).

Intent of the Revision:

- To further define wire wheel buffing as Open-flame Source of Ignition .
- To ensure that workers understand if the highest level requirements on the permit must be met.

RI-348 Benzene Compliance

Revisions:

1. Changes were made to the Appendix of RI-348 showing the process streams throughout the refinery that contain benzene
2. PPE requirements were standardized to match the other RIs
3. Signs and labels were updated to meet the current OSHA regulations.

Intent of the Revision:

To ensure the safety of every employee while dealing with the hazards of benzene by giving them the most recent locations and standards.

RI-348 Question and Answer

1. What are the respiratory requirements for working around Benzene?
2. What new process unit was added to Appendix 1 of RI-348 as having "Process Streams that Contain Benzene"?

RI-366 Contractors

Revisions:

1. Defined Process Safety Management (PSM) Representative roll regarding Contractor Office Audits.
2. Appendix VI - Contractor Office Audit form, clarified and condensed Office Audit Questions.
3. Replaced Appendix II (Attachment A) with current version.

Intent of the Revision:

- Clarification of PSM Representative Rolls and Responsibilities in the Contractor Office Audit process.
- RI updated to reflect the current contract Attachment A.

RI-370 Management of Change

Revisions:

1. Added Management of Organizational Change (MOOC), Inherently Safer System (ISS), and Human Factors programs to Changes Requiring MOC, Section 3.5
2. Added Operating systems below throwaway conditions to Changes Requiring MOC, Section 3.3
3. Added Piping in use at or below throwaway thickness to Examples of "Not-In-Kind" Changes, Appendix III-1

Intent of the Revision:

- Changes to the MOOC, ISS & Human Factors programs to be evaluated and approved using the MOC process per CCCHSD
- Evaluation to operate systems below throwaway conditions to follow the MOC approval process

RI-371 Near Loss, Event Reporting, and Incident Investigation

Revisions:

1. Included revised Global Manufacturing Incident Classification matrices
2. New material to show how TOP fits with LPS plus additional process description
3. New guidance on use of appropriate investigation method

Intent of the Revision:

- To streamline main body of Refinery Instruction
- Align Refinery Instruction with Global Downstream expectations

RI-371, Further Information

- Legal requirements were included as an appendix to RI-371
- There is a new appendix to show NSR Consent Decree investigation requirements
- Deleted references to local investigation using TOP methodology

RI-371 – Question and Answer

1. True or False? Shift Team Leaders and other First Line Supervisors are responsible for ensuring an incident report is placed in IPS before the end of the shift in which the loss or near loss took place?
2. True or False? All Chevron employees and all Contractors working under Chevron Richmond Refinery operational control are responsible for reporting all losses and near losses?